

PATENT APPLICATION
042390P3275R

REMARKS

Claims 4-7, 10, 12, 38-39, 49, 51-52 and 59 have been amended. Claims 9, 41-45 and 56-58 have been canceled by this amendment and no new claims were added by this amendment. Claims 1-8, 10-13, 38-40, 46-55 and 59-61 are pending in the application.

Response to the 35 U.S.C. §112 Rejection

The Office Action rejected claims 39, 40 and 43 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In response, Applicants have amended claim 39 to properly depend from claim 38. Claim 43 has been canceled per this amendment. It is believed that the amendments made by this response to claims 39, 42 and 43 are sufficient to overcome the rejection under 35 U.S.C. §112, second paragraph, and accordingly, that rejection should now be removed.

Response to the defective reissue oath/declaration

The Office Action states that the reissue oath/declaration filed with this application is defective in that it failed to refer to all of the amendments made in the application since it was filed. A proper reissue oath/declaration will be prepared and submitted before allowance of the subject reissue application.

Response to the claim objection

The Office Action states that claims 7-13 and 38-61 are not in the proper format for a reissue. Applicant, in accordance with 37CFR §1.173 (b)-(d) and (g), have indicated the matter to be omitted by reissue by enclosing that matter in brackets, and further, the matter added by reissue is indicated by an underlined of that matter. Per §1.173, the entire text of each claim being changed is included with a parenthetical expression expressing the type of change made to the claim. Further, the matter added by reissue is underlined per §1.173.

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Response to the claim rejection

The Office Action states that claims 7-13 and 38-61 are rejected under 35 U.S.C. §251 as being an improper recapture of broadened claimed subject matter surrendered in the application for the patent upon which the present reissue is based. It is believed that the broadening aspect of the claim language in the base claims now relates to subject matter that has not been surrendered during the prosecution of the application. It is further believed that the base claims include the limitations relied upon to overcome the prior art rejection in the patent. The independent claims under rejection have been amended to more clearly claim the elements and features recited in the Examiner's statement of reasons for allowance.

The Examiner specifically stated that "prior art does not teach a system and method for an operating system monitoring the application mix executing in a processor and determining a required frequency and a minimum voltage at which the processor core can operate the required frequency." Applicants' independent claim 7 as amended recites a processor having a state machine, the processor coupled to the static random access memory and including an operating system to monitor an application mix to determine a frequency and a voltage at which a core of the processor can operate in executing the application mix, the operating system to direct the state machine to enter a state in which the frequency and the voltage are adjusted in accordance with the application mix. It is believed that the amended claim 7 clearly includes the subject matter stated by the Examiner as not found in the prior art. Accordingly, Applicants believe that claim 7 as amended overcomes the rejection under 35 U.S.C. §251.

Applicants' independent claim 12 as amended recites a method that includes determining an application mix being executed within a processor as monitored by an operating system; determining a frequency at which the processor may operate given the application mix; selecting a minimum voltage potential that corresponds to the frequency; and directing a state machine to enter

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a state in which the frequency and the minimum voltage potential are set to at least a portion of the processor in accordance with the application mix. Again, Applicants believe that the claim 12 as amended clearly includes the subject matter stated by the Examiner as not found in the prior art. Accordingly, Applicants believe that claim 12 overcomes the rejection under 35 U.S.C. §251.

Applicants' independent claim 38 as amended recites a method of operating a processor that includes monitoring, by an operating system, an application mix executed by a processor; determining a frequency and a minimum voltage potential at which the application mix executes; and using a state machine to adjust the frequency and the voltage potential supplied to the processor to the minimum voltage potential based on the application mix to be executed by the processor. It is believed that the amended independent claim 38 includes the combination of claim elements and features recited in the Examiner's statement of reasons for allowance. Since claim 38 includes these elements and features, it is believed that claim 38 overcomes the rejection under 35 U.S.C. §251.

The Examiner further stated that "prior art does not teach a processor core and pad ring in which the processor core operates at a minimum supported voltage independent of the voltage required by the pad ring." Applicants' independent claim 46 recites operating a core of a processor at a voltage independent of a voltage that operates a pad ring of the device; monitoring an application mix to be executed by the core; and setting a frequency and the voltage at which the core of the processor operates to a minimum voltage in accordance with the application mix. Applicants believe that this claim language includes the elements and features indicated by the Examiner to overcome the prior art. Accordingly, Applicants believe that claim 46 overcomes the rejection under 35 U.S.C. §251.

Again, the Examiner specifically stated that "prior art does not teach a system and method for an operating system monitoring the application mix executing in a processor and determining a required frequency and a minimum voltage at which the processor core can operate the required frequency."

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Applicants' independent claim 49 as amended recites a processor; a voltage regulator adapted to provide at least two voltage potential levels to at least a portion of the processor; and wherein the voltage potential level provided by the voltage regulator is adjusted depending on the application mix executing in the processor and is provided to an electrically common terminal in the processor.

Again, the Examiner stated that "prior art does not teach a processor core and pad ring in which the processor core operates at a minimum supported voltage independent of the voltage required by the pad ring." Applicants' independent claim 53 as amended recites a method comprising operating a processor core at a first voltage independent of a second voltage that operates a pad ring associated with the processor core, said first voltage being varied in accordance with changes in an operational load of said processor core. These features of Applicants' claim 53 are believed allowable based on the Examiner's statement of reasons for allowance.

Applicants' independent claim 59 as amended recites a processor to execute an application mix that is monitored by an operating system; and a state machine adapted to set a frequency of a clock provided to the processor used to execute the application mix and further adapted to provide a voltage potential predetermined in accordance with the frequency of the clock to at least a core of a processor for the frequency.

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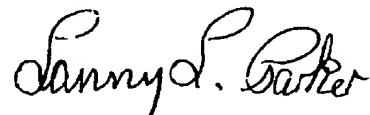
Conclusion

The foregoing is submitted as a full and complete response to the Office Action mailed February 2, 2005, and reconsideration of the rejections is requested. It is submitted that claims 1-8, 10-13, 38-40, 46-55 and 59-61 are now in condition for allowance and allowance of these claims in this reissue application is earnestly solicited.

Applicants herewith petition the Director of the United States Patent and Trademark Office to extend the time for response to the Office Action dated February 2, 2005, for 3 months. Please charge Deposit Account #50-0221 in the amount of \$1020.00 for a three month extension. Should it be determined that an additional fee is due under 37 CFR §1.16 or 1.17, or any excess fee has been received, please charge that fee or credit the amount of overcharge to deposit account #50-0221.

If the Examiner believes that there are any informalities that can be corrected by an Examiner's amendment, a telephone call to the undersigned at (480) 715-5388 is respectfully solicited.

Respectfully submitted,
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